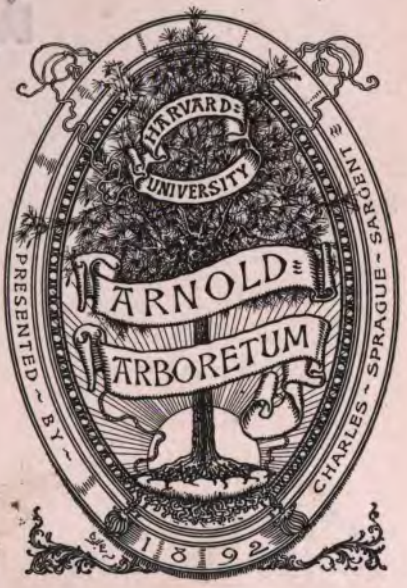
HARVARD
UNIVERSITY
ARNOLD
ARBORETUM
PRESENTED BY
CHARLES SPRAGUE SARGENT
1892

HINTS

ON THE

PLANTING AND GENERAL TREATMENT

OF

HARDY EVERGREENS,

IN

THE CLIMATE OF SCOTLAND,

PARTICULARLY THE FOLLOWING:

STRAWBERRY TREE.	ARBUTUS UNEDO.
COMMON HOLLY.	ILEX AQUIFOLIA.
COMMON LAUREL.	PRUNUS LAUROCERASUS.
PORTUGAL LAUREL.	PRUNUS LUSITANICA.
ALATERNUS.	RHAMNUS ALATERNUS.
LAURESTINE.	VIBURNUM TINUS.

By WILLIAM M'NAB,
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HINTS

ON THE

PLANTING AND GENERAL TREATMENT

OF

HARDY EVERGREENS.

THE plants enumerated in the title of this paper, are only a few of the hardy evergreens that are cultivated in Scotland; but I am convinced, from long experience, that any person who successfully plants and cultivates them, may cultivate almost any other hardy evergreen with equal success.*

It is unquestionably true, that evergreens are cultivated in Scotland much more sparingly than good taste would dictate. Every one capable of enjoying the beauties of rural scenery must regret this, and in proportion to such regret will be his desire to see the evil corrected, which is the sole object of the present Essay. But, in order to correct this evil, it is necessary, in the first place, to refute certain prevailing errors which, as I apprehend, constitute its cause. I am persuaded it cannot generally be attributed to unconsciousness of the defect, and consequent carelessness about having it remedied; for I have seen, with regret, many instances where failure attended anxious endeavours to cultivate evergreens on a very respectable scale.

There are other reasons than those of good taste alone which would lead to the cultivation of evergreens in large

* I wish it to be understood, that, in speaking generally of Evergreens, I do not include the Fir tribe.

quantity, were the certainty of their successful cultivation, which I am now to demonstrate, better understood. They furnish admirable shelter for game of every description, and there are few followers of the hounds who would not willingly draw a laurel alternately with a gorse cover. Even the value of some evergreens, as a crop, is enough to secure for them attention; and, if there be any landed proprietor, who can look with indifference at the beauty of a plantation interspersed with underwood of well selected evergreens, he may, notwithstanding, kindle with eagerness at the contemplation of the price which would be paid for some sorts, on account of their value in various arts. It is not, therefore, because there is no motive for their cultivation, that evergreens are neglected in Scotland, nor because those motives are unappreciated. Is it because our soil or climate is not adapted to their constitutions? This is a very common error, but that it is an error, will be very easily shown. I will venture to assert, that there is not, in a more thriving state, in any district of Britain, a collection of evergreens, of such variety and extent, as that in the Royal Botanic Garden of Edinburgh, nor one which has made a better appearance in so short a time after planting.

Every person in Scotland, who takes the least interest in such questions, must recollect having seen, in many districts, splendid examples of evergreens, which would do credit to any soil or climate; and very rarely, indeed, do any of the species named in the title of this paper suffer materially from our severest winters. No doubt, I have seen the common Laurel cut down to the ground, in some parts of Scotland, from the intensity of the frost, and the Portugal Laurel and Laurestine have been known to meet the same fate; but this very rarely happens, and perhaps never, except in inland parts of the country, and in situations which are low and damp. I apprehend the principal cause of the scanty culture of evergreens in Scotland may be found in

circumstances more discreditable to the Scotch cultivator than an indifferent soil or climate, but which are fortunately more susceptible of remedy; and I am not without hopes that a due consideration of the cause may tend, in a great degree, to put the matter on a right footing.

I have had considerable experience in the planting of hardy evergreens of all sorts and various sizes, indeed perhaps greater experience than generally falls to the lot of practical gardeners. This experience has been gained under the eye of the public, and, I believe, I have obtained a degree of credit for success equal to any of my brethren in the profession; at least, I am not aware that I have been censured for want of success in what I have attempted; and, as times go, if a man in a public situation, acting under the public eye, escapes censure, it may, I presume, be fairly inferred, that he does not deserve censure. As I am quite persuaded, that the chief cause of failure in the cultivation of these most ornamental plants, proceeds from the uncontradicted promulgation of certain instructions regarding the season and manner of planting, which are, indeed, reiterated by almost every author who treats on the subject, and the too ready compliance with these instructions, I am not without hope, that a few hints, derived from the practice I have had, may be useful to the gardener whose only experience has been in acting under such instructions. Should I be fortunate enough to express intelligibly my ideas upon this subject, and intelligibly to detail my practice, and if that practice shall be followed, I doubt not we may soon see evergreens in far greater abundance than heretofore in the pleasure-grounds of noblemen and gentlemen, and even as underwood in extensive forests; for I cannot permit myself to imagine, that it is either the want of taste or of climate, neither is it the unsuitableness of soil, which has prevented their abundance hitherto.

I do not, however, mean to insinuate, that the injudicious management of the gardener is the sole cause of ever-

greens being found in much smaller numbers, and in much less perfection, than could be wished: On the contrary, I wish it to be understood, that I believe many gardeners know as well as I do how to plant, and how to treat these essentials in a fine landscape; various causes interfere to put it out of the power of the gardener to plant at the proper season, or to bestow that attention which they absolutely require to establish their health.

I am anxious, however, to show, that, without a certain degree of attention, and a proper selection of season, it is only a waste of time and of money to make the attempt, in order that, where circumstances can admit of it, attention may be given to details, which I know will ensure success.

Much has been said of late about the ignorance of Scotch gardeners, particularly in a work written by Sir Henry Steuart, entitled "The Planter's Guide," to which some one has written an answer, in a pamphlet under the title of "Strictures on Sir Henry Steuart's Planter's Guide, by a Planter of some Experience."

I think this defence of the profession, by the author of the "Strictures," was unnecessary: Sir Henry is very unmeasured in his censure, but a libel is innocent when it is notoriously overcharged.

I am somewhat interested in this controversy, in so far as Sir Henry has taken from me all the credit of our success in transplanting the trees from the Old Botanic Garden, and transferred it to Dr. Graham. But this excites in me no degree of anger, because Sir Henry, at the same time, attributes this success chiefly to the circumstance of Dr. Graham having, at his (Sir Henry's) suggestion, adopted the *previously unheard-of expedient* of cutting the roots round the plants sometime before transplanting, though, before "The Planter's Guide" was written, I most distinctly recollect hearing Dr. Graham say, that he told Sir Henry, that neither he (Dr. Graham) nor I claimed any merit for inventing what every school-boy knew, and that, in point of fact, I had prepared the roots

of a number of the transplanted trees in the spring of 1819, before Dr. Rutherford's death, and, consequently, before the present Professor of Botany had any thing to say in the matter.

These statements Dr. Graham has made so often, both in his lectures and in private conversation, that I am sure they are generally known; and, therefore, an assertion that I was ignorant of this fact, till I got my information, at second-hand, from Sir Henry, gives me no sort of uneasiness.

With regard to the charge of ignorance brought by Sir Henry against practical gardeners, much will depend upon his definition of this word. If by ignorance, is meant a want of scientific knowledge, of which Sir Henry makes no little parade, I must at once admit the justice of it. But if he interprets it into a general want of practical knowledge of our varied profession, that is a point I am not disposed so readily to concede; for, even with regard to Arboriculture, a branch which Sir Henry seems to think he has made peculiarly his own, I am not prepared to yield the palm to him, and there are, I am convinced, many other practical men who are more than his equal in a knowledge of that branch of the art. But leaving the decision of this matter to competent and disinterested judges, there are many things, in regard to which Sir Henry's science might have been better employed than in scattering calumnies against a class of men who, until he chose to stigmatize them, possessed, and, notwithstanding the *fearful weight* of Sir Henry's *testimony* against them, I will dare to say, still possess, a tolerable reputation all over the three kingdoms. With all my admitted ignorance of science, I flatter myself I have not been altogether an inattentive observer of the operations of nature, some of which, when I could discover their *rationale*, have been useful to me. But there are not a few, the causes of which are to me wholly unknown, which, if rightly explained, (and a proper application of science might, perhaps, effect this,) would

afford much gratification to the inquiring minds of ignorant gardeners, and might be of great practical use. I shall here notice some of these, regarding which, I can answer for myself, and I think I may say also for my brethren in the profession, we would rejoice, and with gratitude, over any information which Sir Henry's science may afford us.

In walking through the Botanic Garden, (not having been at Allanton, I can only guess that such things may also be seen there,) I occasionally come to two evergreens of the same species, of equal age, planted out within the same hour, treated precisely in the same manner, growing in the same soil, and which, in fact, had never been ten feet removed from each other, since, as cuttings, they were severed from the same bush, and I observe that one of them is nearly twice the size of the other, and yet both appear equally healthy. Now, how this happens, I admit myself to be profoundly ignorant.

I also frequently observe in the Botanic Garden, two neighbouring evergreens of the same species, which have arrived at the same age, under similar circumstances; in the one, every leaf is entire, green, and healthy; while the half of every leaf of the other is brown, withered, broken, and dead,—why, I do not know.

In the same walk of the garden, I have seen two evergreens, both exotic, and natives of a warmer climate than ours, from the same field, in the same country, treated precisely in the same way in this, the one enduring with impunity sharp frost, the other losing nearly all its leaves, and the tips, at least, of its branches, whenever the thermometer falls a few degrees below the freezing point. The cause of this peculiarity of constitution is another instance of my admitted ignorance.

Farther, after a sharp frost of some duration, I find another enigma in the operations of nature within the same ground, which makes me feel, and I here readily acknowledge, my ignorance. Two exotic evergreens, of different

species, close beside each other, and similarly exposed, have suffered very differently; in the one, all the young wood is killed, but the old wood of the stem and branches is perfectly sound, and quite in a condition to push out abundance of healthy shoots in spring. In the other, the bark on the old wood, every where above the surface of the ground, is torn, peeled, and dry, and the plant, therefore, irrecoverably dead, yet the young wood at the tips of the branches, and even the leaves covering them, though totally unprotected, are all alive, have sustained not the slightest injury, and, if taken off, will form healthy thriving cuttings. I cannot even form a tolerable conjecture as to the cause of this difference of effect on plants, which, though of different species, are, to all appearance, both in habit and structure, extremely similar.

Another thing I observed in the Botanic Garden, in the beginning of April, 1828, which I find most difficult to explain. Early in February of the same year, some evergreens having been taken from a thickly shaded plantation, immediately upon the north side of a high wall, where certainly they could not have seen the sun for several months, and where they grew in rather damp soil, were planted in an exposed situation, and in very sandy soil, by the side of similar species, which had not been moved for several years. Both looked perfectly healthy; but in March, a severe drying frosty wind set in, and, I think, every one would have expected, that the plants which had been lately moved would have suffered most, yet they escaped without a leaf being injured, though, from the situation in which they previously grew, they must, of necessity, have been destitute of all "prerequisites and protecting properties;" but their neighbours, which had occupied their ground for years, were all more or less injured, having their leaves, or great part of them, destroyed, and the points of many of their youngest shoots killed.

My next puzzle I must state upon the authority of

another,—I certainly know no parallel instance myself. In the Gardener's Magazine, Vol. V. p. 669, we are told, that on the west coast of Scotland, (the particular place is not named,) the *Digitalis Canariensis* "is one of the hardiest plants we have, and ripens its seeds abundantly, retaining its verdure throughout the severest winter, and is, indeed, quite an evergreen shrub."

Now, supposing the fact to be so, (for, be it recollected, I by no means state it on my own authority,) I think it most extraordinary; for I know well, that, on the east coast of Scotland, a degree of frost, much less than occurs in any part of the west of Scotland which I have been in, is sufficient totally to kill the *Digitalis Canariensis*; and it is utterly incomprehensible to me, how, on the west coast, this plant has acquired a power of resisting cold, which I know it does not possess here.

These, and a multitude of other examples of admitted ignorance, might be quoted against Scotch gardeners, and we must be content to bear the imputation, suspecting all the while, however, that we are not very singular. These, and a thousand similar instances, it does seem to me, form the difficulties with which it is the province of "science" to grapple; and he who shall solve them, may, in justice, without egotism, without the risk of being laughed at for arrogating to himself and to his subject more importance than they deserve, and, certainly, without running the risk of a charge of plagiarism, claim for himself all the merit of an original discoverer.

Without, however, such lofty pretensions, we may all be useful. The art of the gardener and forester is an important, and it is a multifarious one. We cannot each of us do every thing; some of us have a reputation for succeeding in one department, others are most successful in another, and some of us could at one time do what we afterwards very generally fail in, and are compelled to admit, that *we hae tint the gate o't.*

"One science only will one genius fit;
So vast is art, so narrow human wit,
Not only bounded to peculiar arts,
But oft in those confined to single parts."

I have sometimes heard men say, they were equally expert at every thing; but it is not an unfair rule, which places these actors of all work at least as low as their neighbours. When we confine ourselves, however, to the particular departments in which we have had unusual experience, we may very often do good in our generation, by making known the little improvements which our own blunders, and the observations of those of others during their operations, have suggested. Upon this principle, then, Sir Henry Steuart's "Planter's Guide" has really been a boon to the public; and upon the same principle, perhaps, these much more humble "Hints on Planting Evergreens," may be of useful application. Much credit is undoubtedly due to Sir Henry; for it does appear from his book, that, at great expense, and by the accumulating experience of years, he has at length acquired the power, though in very unpropitious circumstances, of applying, with much greater success than they did, the directions of our grandfathers for transplanting trees; and I think it is equally certain, their operations have in the detail been, in some circumstances, improved.

But it is now time, perhaps more than time, that I should turn to the proper object of this paper.

The seasons already recommended by different authors for planting evergreens are very various. In general, however, we find that the popular directions is to plant early in autumn or late in spring, that is, in August and September, or in the end of March, in April, or early in May.

Miller, in speaking of the common Laurel and Portugal Laurel, says, "When a large plantation of laurels is in-

tended, the work of transplanting may be done at any time during winter, when the weather will permit, but October is the best season." *Martin's Edition of Miller's Dictionary.*

The same author says, that the "best season for transplanting *Arbutus* is September;" "*Holly*, in autumn, in dry land, but in cold wet soil they may be transplanted with great safety in spring;" "*Laurestine*, Michaelmas is the best time; they may also be removed in spring with balls of earth, or in the end of July or beginning of August, if rain should happen at that season;" "*Alaternus*, they may be transplanted either in the autumn or the spring, but in dry land the autumn planting is the best, whereas in moist ground the spring is to be preferred."

The same author says, in his article on Planting, "The seasons for planting are various, according to the different sorts of trees, or the soil in which they are planted; for such sorts as the leaves fall off in winter, the best time is the middle or end of October, provided the soil be dry, but for a very wet soil, it is better to defer it till the latter end of February, or beginning of March; and for many kinds of evergreens, the beginning of April is by far the best season, though some sorts may be safely removed at midsummer, provided they are not to be carried very far; but you should always make choice of a cloudy season, if possible, at that time of the year, when they will take fresh root in a few days, and, on the contrary, when these trees are removed in winter, during which time they are almost in a state of rest, they do not take root until spring advances, and sets the sap in motion, so that many times they die, especially if the winter proves severe."

Thus Miller leaves us a little in the dark, after all, as to the best season for planting evergreens in general: he says, as above, that when a large plantation of laurels is to be made, they may be planted any time during winter, when the weather will permit, but October is the best time;

but in every other passage he says spring, autumn, or summer; and in his article on general planting, he says April is the best time, and endeavours to show that winter is a bad time for doing such work.

Loudon, in his *Encyclopædia of Gardening*, on the culture of nursery trees, page 979, says, "All the deciduous sorts may be transplanted in February, or early in March; and all the evergreens from the middle of April to the middle of May, and during the month of August."

The same author, in his *Kalendarial Index*, in the above work, recommends the end of March, April, or early in May, and last week in August, for planting evergreens; and for the month of April, in the same index, we have the following directions given: "Plant evergreen trees, as pine, fir, cedar of Lebanon, holly, and yew, during the month, but finish planting deciduous sorts as early as possible." "Wherever the plants are to be, or have been, long out of the ground, take good care to dry up their roots, by exposing them as much as you can to the sun and air; do not be nice in planting."

I cannot but think that these recommendations have, through inadvertency, been printed, because they are quite at variance with judicious instructions given elsewhere by the same author; and, as far as I am able to judge by my own experience, or from the dictates of obvious analogy, are opposed to every thing like successful practice.

We are told, in Sir Henry Steuart's *Planter's Guide*, 1st edit. p. 440, that "By planting early, that is, soon after autumn, or not later than February and March, all trees (oaks and evergreens excepted) are surprisingly benefited." Now, this experienced planter has told us the time that is improper to plant evergreens; but I am not aware that he has any where expressly told when the proper time is for performing such work, though I think he has left us to infer it. He gives us an instance, p. 319,

of having planted some hollies in March, and some of them having died. It is fair, therefore, to conclude, that March is an improper time. Indeed he says so; and, if winter, February and March is a bad time. If we exclude summer, which probably he would, there is only the autumn, and April and May left, when such work can be done; so that we may suppose, that had he recommended any particular time, it must have been either autumn or spring,—the favourite time for planting evergreens with almost every body except myself. Now, besides the foregoing authorities, many could be quoted, all recommending nearly the same season for planting evergreens.

If we ask nurserymen what is the best season of the year to plant hardy evergreens, the answer of five out of six will be, spring or autumn, or perhaps early in autumn, or late in spring. If we ask practical gardeners the same question, the same answer will be received. If we go a little farther, and ask a nurseryman to take the trouble of looking over his books, to ascertain what months in the year he executes the greatest number of orders for evergreens, (no matter whether the orders are directed by the gentleman or the gardener, to be forwarded at a particular time, or whether, as is frequently done, the time is left to the judgment and discretion of the nurserymen,) we shall find that the greatest number of orders for evergreens stand in their books for April and May, (in some twice as many as for any other time,) and next to that in August and September, and very few are sent out at any other time; all shewing, that the general feeling is, that spring and autumn are the best seasons for planting evergreens.

But there is another kind of evidence on this subject, which I value more, but which I have often in vain attempted to obtain,—the evidence of experience rather than of theory. I have often asked gardeners, if they have happened to plant evergreens in August or September, in November or December, in April or May, which of his plants

he found to thrive best, which to succeed worst? but I rarely can get a better answer than, "I would consider those planted in autumn as more likely to succeed best;" or, "I would expect that those planted in spring would do best;" but most express their belief, that those planted in winter would do the worst.

This, however, is not at all satisfactory to me. I want facts, but find it extremely difficult to obtain them from others. I want to know, from gardeners, who may have planted evergreens repeatedly in these three seasons with equal care; I want to know, from their own observations, and at the end of a year or two after planting, which of these evergreens have succeeded best, and which have done worst, but never got one to answer satisfactorily.

This I hope I shall be able to answer satisfactorily from my own experience, before I have done with this subject. I know it will be considered a bold step in me, (I tremble when I think of it,) in the face of all the authorities already quoted, and in opposition to the opinion of a great proportion of the practical horticulturists in the country, to come forward and assert, that the seasons usually recommended for planting evergreens, viz. spring or autumn, are far from being the best, are, in fact, under most circumstances, the very worst season which can be selected for performing such work; I know that many will exclaim, as soon as they see this, that I am wrong; the reader is quite entitled to think so, unless I shall show, as distinctly on paper as I can in practice, that I am right.

First, then, if I shall be able to show that winter is no worse a season for planting evergreens, than the seasons already recommended, I shall certainly have gained a considerable point. To render this not improbable, I may recall the attention of the reader to the fact, that the seasons recommended by the different writers quoted are various, and that, therefore, the point has not been looked upon as settled, and if still doubtful, the decision may ultimately

be in my favour. It farther appears that winter planting has, in certain circumstances, been permitted by authors, but not recommended. It also appears from the above quotations, that the season recommended varies with the kind of evergreens to be planted. Now, if I am right in asserting, and my experience has taught me to be confident that I am, that the evergreens I have mentioned, as well as all other hardy evergreens that I am acquainted with, and have had experience in, may be planted at the same time, and even in the same day, with equal success, another material point is gained; for when large plantations of evergreens are to be made, it will be found much more convenient to get them all from the nursery at the same time, and to plant them all at the same time, rather than to get one kind in spring, another in August, another in September, another in October, and so on.

I may mention, that I have planted evergreens at all seasons of the year with nearly equal success, except from the middle of June to the middle of August, and even during this period I have planted some; but unless the weather is very dull and moist, and even with such weather it is difficult to prevent the plants suffering considerably, and in many cases it is years before they recover; although, however, I have planted evergreens ten months out of the twelve with little difference in the success, yet one season has a preference over the others with me, and when there is the power of choice, I would recommend late in autumn, winter, or very early in spring; that is, any time from the middle of October till the middle of February, and in general the beginning of this period is the best; that is, from the middle of October till the middle of December; always providing that the weather and the ground are favourable; that is, supposing there is no frost, no drying wind, nor much sunshine, and that the ground is not too much saturated with wet, either from continued rain, or from the nature of the soil. One of the principal things

to be attended to in planting evergreens, is to fix on a dull day for winter planting, and moist day for spring and autumn planting. There can be no secret in the proper treatment of evergreens; if there were, I should say, that it is in preventing their roots from becoming dry when out of the earth; to choose moist and cloudy weather for planting; and still better, if we had the power, by foresight or otherwise, to secure a continuance of such weather some time after they have been planted. If the roots of evergreens be allowed to dry when out of the ground in spring, it is scarcely possible to prevent their suffering considerably, and showing this injury for a long period after they are planted. Now, it is quite true, that we occasionally have such weather as I have said is fit for our purpose in spring, and too often even in summer, and therefore it has happened, as I have already said, that I have planted successfully during ten months of the twelve. But though we seldom can have difficulty at any season in selecting a moist day, or at least some hours in which the weather is sufficiently moist for planting, yet I know no secret by which, at any season, we can determine that, after planting, we shall for a week or more be free from sunshine; and I know, in common with every body who has any experience in planting evergreens, that they suffer considerably if exposed to a hot sun immediately after being planted. Though I know no means by which I can divine what the weather may be some days after planting, yet we all know, that, in winter, there is a greater probability of moist cloudy weather than at any other season; and we also all know, that, even if we should be disappointed, and the weather become clear after planting, yet the sun is but a short while above the horizon in winter, and has but little influence. Half a day's sun, in spring or autumn, will do more harm immediately after planting than a whole week's sun from morning to night in the middle of winter. If, therefore, there is no other objection to planting in win-

ter, it is on this account the best season, for we are often days, and even weeks, without sunshine,—and I have seen no instance of evergreens planted in the middle of winter, and properly treated, thriving worse than others planted in August, September, April, or May, even when these got a few days or a week of dull moist weather after planting. If, then, we are certain, which I am, that evergreens planted in winter will thrive as well as those planted in spring or autumn, under the most favourable circumstances; and if we find, as I do, that evergreens planted in winter will do much better than those planted in spring or autumn under unfavourable circumstances, then, surely, the winter planting must be the best; for we find, at that time, that we can always plant (except during severe frosts, or in a very drying wind) with perfect certainty of success; whereas, in spring or autumn, there is great risk of failure, except we can get a few dull days or moist days after planting, and this is quite uncertain.

Now, I think I have shown, that we can plant evergreens during winter with greater certainty of success than at any other time; and I am equally convinced, that we can plant them with less trouble, and, consequently, at less expense, than at any other season; for, when evergreens are planted in the winter, and treated as I shall recommend, as being found to be the best, they cannot require so much water when planted; indeed, the ground will seldom take in so much as it will do in spring or autumn. When planted in winter, they will scarcely ever require any watering during the following summer, unless it should prove very dry, and unless the plants are of a pretty large size. On the contrary, if planted late in spring, they will, in general, require once watering during the summer, to ensure the same success as in those planted in winter; the same holds good with those planted in August or September, as we often find the ground as dry then as at any other time of the year; so that by winter planting we ensure the

same success, and save labour in watering. The advantages of winter planting are so great and manifest, that it seems strange they should have been overlooked. I am persuaded that it is false theory that has excited all the prejudice that exists on the subject. We are told that evergreens planted in winter can push out no roots till spring set their juices in motion, and that, therefore, while in this state of inaction, they run great risk of being killed. Now, I must take the liberty of disputing the assertion upon which this inference is founded. Winter transplanted evergreens do make roots before spring, and therefore cannot, on account of the want of them, be more easily killed. I do not mean to say, that in a continued frost which lasts for months, and where the whole earth about the root is congealed into a mass, the roots of evergreens will grow; but we never have such continuance of severe frost in this country. During the winter we often have intervals of a week or a fortnight, and even sometimes three weeks, of mild weather, and in such weather the roots of many evergreens do grow. Let any person that has a few duplicates of different kinds of evergreens to spare, plant or lay them in by the heels, and soak them well with water, any time during the period I have recommended as the best for planting; let him take these same plants up again in the end of March, April, or beginning of May following, he will find they will have made a considerable number of fresh roots between the time he put them in and the time he took them up. Every nurseryman knows, that of the cuttings of some sorts of evergreens, put into the ground, as is usual, in September or October, many will have made roots during the winter, as will easily be seen by taking some of them up in March, April, or May.

Since, then, we find that the roots of some plants grow in winter, why not give the plants the benefit of these roots, by planting them at such a time as will afford that opportunity, before the hot weather of summer comes on? for,

by having such roots, they will be better able to resist injury, than if they had to make them after April and May.

I do not mean to say, that all the evergreens that have been planted in the Royal Botanic Garden, within these few years, have been planted in the winter. I have already mentioned, that I have planted them at all times, as it often happened that I had not a choice of season; a considerable number of them, however, has been planted in the winter, both in the dry part of the garden, and in the wet part, and all have done equally well.

One thing, which I may mention, operates very powerfully against planting evergreens in winter. No gardener, unless he has had very extensive practice in planting evergreens at all times, and knows, from his own experience, that they may be planted with perfect safety in winter as well as in spring or autumn, is safe to plant evergreens, except at the times generally practised and generally recommended; for if, from careless planting, or other causes, part of these evergreens that he has ventured to plant in winter does not succeed, he will be blamed for the failure, as having planted them at an improper season; nay, he will perhaps blame himself for so doing. Even his own men, amongst themselves, will say, "O, no wonder master did not succeed with these evergreens, when he has chosen to plant them at a time when nobody else but himself would have thought of doing such work."

If the same gardener had planted the same number of evergreens at the times usually practised and recommended for such work, and had the same number of failures as in his winter planting, no notice probably would have been taken of the circumstance, seeing the work had been done at what is considered the proper time.

The very same thing holds good with nurserymen; for, supposing they get an order for evergreens, to be executed at the time they would recommend as the best, if they

execute this order in winter, and a quantity of the plants do not succeed, they will be blamed for sending them at an improper season. There cannot be a doubt, but this is what operates with nurserymen, and prevents them from sending out such orders in winter; for it is evident, that it would be more advantageous to them to have their orders made up in winter, as they would be thus enabled to get their ground cleared and ready for planting; whereas, by the present practice, their own evergreens are almost always too late of being planted in spring, partly from the ground not being cleared, and from it being uncertain how many evergreens may yet be required to fill up orders.

I have no title to originality in planting evergreens in winter, nor any wish to claim it. Many examples might easily be found of evergreens having been successfully planted in winter—planted, perhaps, before I knew what an evergreen was; and it is only astonishing, that some one did not come forward earlier, and make this more generally known. It is needless to wander through the country to seek such examples; I already know where to find some, and I am satisfied I could find many more.

I shall take one example, which may be seen without much trouble, by any one interested about evergreens, and who is in, or who may happen to visit modern Athens in winter. I say winter; because then, I think, evergreens are seen to more advantage than at any other season. Let any one look at the evergreens in Hillside Crescent, by the side of the New London Road from Edinburgh, in front of the house of the Right Honourable William Allan, Esq. of Glen, present Lord Provost of the City of Edinburgh. They are principally Portugal Laurel, Common Laurel, Laurestine, Holly, Alaternus, and a few specimens of Arbutus, and were all planted in the months of November and December, in the year 1824, and under his Lordship's own immediate auspices, and without any other watering, even at the time of planting, but that which fell upon them from the

heavens. Of many hundreds, nay, I believe, several thousands, of those evergreens planted in that Crescent at the above time, very few failures occurred; but an instance of evergreens planted in the spring of the following year will be given hereafter, (p. 31,) which proved nearly a total failure. Now, let any person compare the evergreens in Hillside Crescent, with all the evergreens in the public squares, crescents, circuses, places, or gardens in Edinburgh, and if they are not satisfied that the winter is a good time for planting evergreens, they must at least, I think, be satisfied, that it is not the very worst time that can be fixed upon. This qualified acquiescence in my opinion, is, perhaps, all that I am entitled to hope for; for, notwithstanding all that I have said about planting evergreens, and notwithstanding my belief, that all which I have said is founded on common sense, and has even proved to be correct by long and extensive practice, yet many a person, from prejudice, obstinacy, or indolence of mind, will argue, what every body says must be right; and as almost every body says, that spring and autumn is the best time for planting evergreens, it is not likely that any thing I have said, or can say, will be the means of inducing people in general to change to the time that I am satisfied, from practice, is the best for performing such work. "Errors of long standing can only experience a lingering death."

The treatment, however, which I shall recommend, is nearly the same at all seasons; only in winter they may be planted with perfect safety in a dull calm day, whereas in spring or autumn, a moist rainy day is preferable to any other; but where a person has not a choice of such weather, then the work should be performed in the evenings after the sun gets low, particularly in spring or autumn planting.

The way, however, in which I have treated evergreens, is not so easy in all its detail, where a great extent of ground is to be gone over, but I think in three cases out of four it may easily be adopted; indeed, it may be easily

done in all cases, for it is only planting ten instead of twenty, and it requires no great depth of knowledge to see that ten plants, which will thrive well, is better than twenty plants, ten of whom will die, and perhaps five more remain sickly for years. From what I have seen, this is by no means an unfair calculation, particularly when large-sized evergreens are got out of a nursery, (but of this I shall speak afterwards,) sent to a distance, planted at the usual season, and treated in the ordinary way.

Some years ago, after we had made some progress in lifting pretty large plants, both evergreens and deciduous, and transporting them from the Old Botanic Garden to the New, an amateur chose to bestow some pains upon me, to teach me how to move such. He was very minute in stating the exact process he adopted, and urged me to adopt the same plan. About fifteen years before that, he said he had planted twenty pretty large plants, or rather small trees, (which, I suppose, was the full extent of his practice in the art;) he also told me the exact sum of money each cost in removing and planting, which I considered very moderate; but, unfortunately, he closed his narrative by saying, that he did not know from what cause, he supposed the plants had not been properly taken care of after removal, but every one of these twenty died the same year they were planted, and he added, "I suppose you expect a great many deaths among yours also." Now, it will surely be better to plant only one that will thrive and do well, than twenty which will die; therefore, nothing can be more evidently proper than the rule, "Do the work well, and do the less of it."

I have already mentioned, that, in planting evergreens in winter, a dull calm day answers very well, but in autumn or spring, a moist rainy day is the best. I have at times been as wet planting evergreens, as I have been when exposed for hours on the windy side of *Ben-nevis* in a wet day, without great-coat, and a broken umbrella.

In planting evergreens, whether in a dull day, a wet day, or a dry day, it is very necessary to keep in view the expediency of keeping the plants for as short a time out of the ground as possible; if only a few minutes, so much the better; and in all cases when it can be done, where great numbers are to be planted, we should, if possible, have some men stationed to take up the plants, others to carry them, and a third set to put them into the ground. In all seasons, situations, and soils, the plants should be well soaked with water, as soon as the earth is put about the roots.* Where the water is not at hand, so that it may be easily carried or wheeled by men, a horse with a water-barrel on wheels should be used, as I am certain this will be amply repaid by the success of the plantation afterwards. As soon as the plant has been put into its place, the earth should be filled in, leaving a sufficient hollow round the stem, and as far out as the roots extend, to hold water, which should then be poured in, in sufficient quantity to soak the ground down to the lowest part of the roots; in short, the whole should be made like a kind of puddle. By this practice, which is particularly necessary in spring and autumn planting, the earth is carried down by the water, and every crevice among the roots is filled. Care must always be taken to have as much earth above the roots of the plants as will prevent them from being exposed when the water has subsided. I find the best plan is to take an old birch broom, or any thing similar, and laying it down near to the root, I cause the water to be poured upon it; this breaks the fall of the water, and prevents the roots from being washed bare of such earth as may adhere to them; in this way time is saved, for the water may be poured out in a full stream from a pail, a water-pot, or

* This is universally true, but the urgency is less, where the evergreens are planted in winter to form underwood in extensive plantations. In this case, the deaths without watering will be so few, that they are not worth avoiding at much expense and trouble.

even from a spout, or pipe in the water-cart or barrel, where the situation is such, that this can be brought up to the plant. After the first watering has dried up, the earth should be levelled round the stem of the plant, and as far out as the water has been put on, but not trod; if the plants are large, a second watering is sometimes necessary, but in ordinary sized plants one watering is quite sufficient, and after remaining twenty-four hours, more or less, according to the nature of the soil, the earth about the stem, and over the roots, should be trod as firm as possible, and after treading, should be dressed with a rake. Where this is practised, and the planting done at the time that I have recommended, there is scarcely a chance of any dry weather afterwards injuring them; but if this method, or something similar, is not practised, there will be a great risk of failure every year, in planting evergreens, particularly when they are planted at the usual times recommended, that is, in spring or autumn. I wish it to be distinctly understood, and I speak from practice, that I should always water evergreens, when planted, whether the work is done in wet weather, dull weather, or dry; or whether the situation in which they are planted is wet or dry, sheltered or exposed, because the watering, as I have recommended, fills up the holes that may be in the earth about the roots, and consolidates the whole mass much better than treading could do. It is, therefore, necessary at every season, but much less will be required after winter than spring or autumn planting. Within these few years I have planted an immense number of hardy evergreens, of all sorts and various sizes, both in wet ground and in dry ground, in autumn, winter, and spring, and they have been all treated in the way I have recommended.

In transplanting evergreens, it is desirable to leave as much earth about the roots as possible, but when treated in the way I have recommended, I consider the greater part of the earth that may be about the roots of importance, in preserving them from injury during the operation,

rather than for any value it may have after the plant has been put into the ground. I am, however, speaking of ordinary sized plants, that is, from one to two and a half or three feet high; if much larger than this, I never could move them with success, without keeping a large ball of earth about their roots, and keeping it as entire as possible. One hint more, and then I have done with this part of the planting of evergreens. It will be found a useful appendage to the foregoing, without which, all that I have said will sometimes be useless, and the want of attention to which I have, at times, seen produce much mischief; it may prove especially useful to those who have much of such work to perform. It is, that I very seldom trust the planting of evergreens to workmen, without being present to superintend the work. Every gardener, however, cannot do this, but when he cannot, he should give the charge to a very trusty man in his absence.

I am aware, that when evergreens have to be got from a nursery, and sent to a distance, where they must often be days, and even weeks, out of the ground, that the method I have recommended cannot be adhered to. In this case, nurserymen ought to be very careful to injure the roots as little as possible in raising them, and to have them out of the ground as short a time as possible, and when packed, it should be in such a way as to prevent the roots from becoming dry, even if they were in the package for a fortnight. They should always be packed in hampers, with strong rods or stakes round the tops, and covered with a mat, and the tops of the plants should be left as loose in the inside as possible, never tied close together much above the level of the basket edge, as they sometimes are. When tied close together at the top, if they are long in the package, there is a great risk of many of them losing their leaves soon after they are unpacked, and with the best management, it will be long before the plants recover. Care should also be taken never to allow the roots to dry between the time they are taken out of the ground and the

time they are packed. This method of packing would, no doubt, add a little to the weight, and, consequently, to the expense of carriage. The safety of the plants, however, will be found far to overbalance this additional expense of carriage. The careful way, too, in which they should be packed, would entitle the nurseryman to make a higher charge for his package; but this additional charge, too, would be amply repaid to the receiver by the superior state his plants would be in.

I am aware, however, that to attend to all this when evergreens are got out of a nursery in spring, is very difficult. Let any man look into a nursery in April and May, the time that we have found that the greatest quantity of evergreens are sent out, and see a large order of evergreens of different kinds taken up from different parts of the nursery, see them all collected together and packed; he will find that at that season, in a dry day, under the most careful management, it is scarcely possible to get all this done before the roots have become perfectly dry. We know that evergreens are never taken up in a wet state to be sent to a distance, or, if they are taken up wet, they must be exposed till the leaves get dry before they are packed, which is nearly as bad as taking them up when dry. Now, these plants could, with perfect ease, be all taken up, collected together, and packed in a dull day in winter, even with ordinary care, without having their roots dried up; and I cannot too often repeat, that this is always a primary consideration in transplanting evergreens. If, therefore, people will not plant evergreens in winter, I would, at all events, recommend them to get these plants out of the nursery in winter, to lay them in by the heels, soaking them well with water, and to let them lie there till what they call the best time for planting arrives; and then they will have their plants in a far better state than when got out of the nursery in April or May. I cannot help here taking notice of a quotation in the *Planter's Guide*, first edition, page 356, said to be obtained from one of the

most candid and intelligent nurserymen in Scotland, for, although it alludes principally to forest trees, it applies equally well to evergreens.

This candid nurseryman is made to say, "Give gentlemen who are the most partial to planting but cheap plants, and they neither know nor care about the quality." (He is again made to say,) "His study, therefore, never is, nor can be, science, or the quality of his plants, but solely and exclusively the art of raising the greatest possible number on the smallest space of ground, and furnishing them to his customers at the lowest possible price."

Now, if this is the feeling among gentlemen and nurserymen, (which I hope it is not,) we cannot expect much attention, on the nurseryman's part, to the growing, taking up, and packing evergreens, in the best possible way, so as to ensure success with them when they arrive at their ultimate destination. He must receive a price for his article and for his packing, which will enable him to live by his profession. This is, however, wandering out of my tract, and, perhaps, treading on rather brittle ground. I may mention, that in whatever way the plants are packed, or in whatever state they arrive, they should be unpacked immediately, and laid into the ground, their roots covered over with earth, (if possible, in rather a shady situation,) and well soaked with water, until a favourable time arrive for planting them out. It will, however, in all cases where the plants have suffered in the package, be better to plant them out in a piece of nursery-ground, pretty close together for the first year, and plant them out the second year where they are intended to grow, always taking care to water freely. There are several kinds of evergreens which should never be ordered from the nursery, unless they have been reared in pots; for among these, even with the most careful management in taking up, packing, and other after treatment, it is scarcely possible to prevent a number of failures. Even the *Arbutus* and *Alaternus* are among that number, unless they have been fresh plant-

ed in the nursery every year. The circumstance, however, of these plants having been kept in pots, implies that a nurseryman must have a higher price for them than for plants grown in the open ground without pots; but the superior state of the plants, and the success with them afterwards, would more than make up all the difference of price. I shall add a list, at the end, of those sorts that should always be kept, or at least a quantity of which should always be kept, in pots in the nursery.

I would beg leave, however, to recommend to every nobleman and gentleman who is at a great distance from a public nursery, where the carriage of large plants becomes expensive, and the long package often injurious, to get them in a young state, and plant them in a nursery in their own premises, and when they arrive at a sufficient size, they are then ready to plant out at any time when the weather is suitable for that work. Of the kinds raised from seed, such as have been one or two years transplanted out of the seed-bed, and of the kinds raised from cuttings, such as have been one year transplanted, I conceive to be of the most desirable size to order. The way that I have practised in nursing such plants, and which I have found to answer remarkably well, is to plant them out in rows in the nursery-ground, at such distance between each row, and between each plant in each row, as will enable them to stand without being too much crowded at the end of the first year, and some sorts that are of slower growth may stand two years before it is necessary to remove any of them. At the end of the first or second year, as it may be found necessary, every other row should be taken out, and, in some cases, every other plant in the row, and either planted out where they are to remain, or, if not considered large enough for that purpose, they should be planted in a piece of nursery-ground as before. The following year they should be again thinned upon the same plan; and this thinning may be repeat-

ed yearly for several years, till the plants that still remain attain a considerable size; and, although they have never been removed since the first planting, they are nearly as well prepared for removal as if they had been several times removed during the interval; for, by taking out the alternate rows and the alternate plants in the rows, the roots of such as remain must have been partly cut every year; thus compelling them to make fresh fibres, which is the object sought from their repeated removal.

Every person that has had any experience in planting evergreens must know, that if they are allowed to stand long in the nursery without being transplanted, (unless the foregoing practice is followed,) there will be a much greater risk of failure when they are at last planted out; that this risk is greatly lessened by their having been frequently transplanted before. Every person that has a great extent of ground to plant with evergreens should get a quantity from the nurseries every year, and nurse them as I have recommended, and then he will always have a succession coming forward; and when plantations of forest trees are about to be made, he will have it in his power to add infinitely to their beauty, by forming an underwood of *Holly, Portugal Laurel, Common Laurel,* and *Arbutus.* These would prove ornamental in the highest degree, would be excellent shelter, an exceedingly good cover for game, and, after they arrived at a certain age and size, would produce abundance of fruit or berries; and if it be ascertained that pheasants are fond of these fruits, (as I know most other birds are,) then they would produce food for them at a time when other food is scarce. I know that nurserymen in general are too enlightened and liberal-minded men to suppose that the practice I have recommended (even should it be adopted, which I fear it will not) would, in any way, hurt their trade. I am of opinion that the trade would be much benefited, and the country much improved by it, because that every year an immensely greater number of ever-

greens would be planted: People soon tire of ordering evergreens year after year, when they find many of them die, and many others remain sickly for years after planting. It is not unnatural that they should persuade themselves that it is the soil or climate that does not suit them; and then, of course, they cease to order more. I happened to be at a gentleman's seat in the month of July, 1825. In the spring of that year they had planted 500 Portugal laurels, which had been got out of a sale nursery, and when I saw them in July, there did not appear to be 100 plants alive out of the whole, and not more than one-half of them were in good health—the others could not attain, for several years, the size they had reached when they were planted.

I do not intend to say any thing on the raising of evergreens from seed or cuttings, as that seems to be quite as well understood by others as by me. I may be allowed, however, to mention, that the same practice should be adopted in planting out of the seed-bed or cutting-bed, as I have recommended when the plants are grown up; with this addition, that the roots of seedlings should be laid in puddle as soon as they are taken out of the ground, and then taken out of the puddle as they are planted. This will completely prevent the roots from getting dry during the time they are out of the ground; but it is also necessary to water them, for the watering keeps the ground in a moist state until the plants have got a sufficient hold of the ground, to prevent them from suffering from dry weather, which may follow. This practice would be an additional expense to nurserymen in planting, as a man could not plant near so many in the same time, as he would do in the ordinary way; but from what I have done myself, and what I have seen others do, I am satisfied that the superior success of the plantation afterwards will more than repay the additional expense that may be incurred for labour in planting.

It may not be out of place here to mention, that I consi-

der it generally useless, and in most cases, as practised, hurtful, to water in dry weather, during summer, evergreens which have been planted in spring. I am satisfied that in most cases more injury is done by watering in dry weather than by leaving the plants to their fate; besides, all the labour is saved, and sometimes the plants also. It is a very common practice, when plants are supposed to want water in dry weather in the summer, to give them a little in the evening, from the rose of a watering-pot, so little, that it does not penetrate into the ground an eighth part of an inch, and this is repeated two, three, or four times a-week, as the state of the plants may seem to require. By this practice, the ground on the surface, from the hot drying sun through the day, gets hard and caked, which prevents any plants from thriving well; besides, not a drop of this watering ever reaches the roots of the plant, and therefore I consider it worse than useless. When watering in such weather is deemed necessary, let it be done effectually, so as to reach to the roots of the plant, and as soon as the water has dried up on the surface, let the whole part, as far as the water has extended, be regularly stirred over with the teeth of a rake. What I fear will not be believed is, that in most cases in which artificial watering is necessary in the summer, a wet day ought to be selected for performing it, both for the sake of expedition, and for the safety of the plants. It will, I know, seem a very foolish direction, and he will be called mad who says it is most beneficial to water plants while rain is falling abundantly; nevertheless, I am willing to stake my reputation for a moderate share of common sense upon it: I speak not theoretically, but practically. It has been my uniform practice, and I have for years seen its advantages. It is also necessary to observe, that we must not think ourselves at liberty to stop short of drenching the lowest roots because it rains at the time. After such watering, if a little fresh earth can be laid over the surface, so much the better, but the ground

about the plants must never be left without being stirred over as soon as it gets a little dry; the practice is equally good, either in regard of old or of young evergreens.

I consider it unnecessary to mention any other evergreens than those I have already named, because they all require nearly similar treatment. *Rhododendrons* and *Kalmias*, however, may be lifted with perfect safety in autumn, winter, or spring, in wet weather, or in dry weather, for when they are in ground that they thrive well in, they may be lifted with balls of earth, so large as scarcely to admit of their roots being disturbed; but at whatever time of the year they are planted, they, like others, should be well soaked with water, as already recommended.

There is but one reason why these evergreens are not more generally cultivated, namely, the expense, in the way they are usually managed. Many, I am convinced, would not object to the expense of the plants themselves, but the difficulty and expense, in some situations, of procuring the soil which is represented as being essential to their well-being, prevents many from planting them to that extent which they would otherwise do. I shall, therefore, state here what will, in many cases, be found a cheap compost, and in which I find *Rhododendrons* and *Kalmias*, &c. thrive remarkably well, and, indeed, nearly all American evergreen shrubs, which are generally supposed to require, or are generally recommended to be planted in peat earth. I say cheap, for when peat earth is difficult to be procured, and cannot be had at all, excepting from a considerable distance, it becomes very expensive. In many places, pit sand and vegetable mould, that is, the earth produced from the decayed leaves of trees, or other vegetable substances, or even rotted hot-bed dung, or a mixture of vegetable mould and rotted hot-bed dung, with sand, will answer equally well, and can often be got in abundance, where peat earth is scarce and expensive.

In good, fresh, hazelly loam, without any mixture what-

ever, *Rhododendrons*, *Kalmias*, &c. will grow and thrive perfectly. Indeed, if I may judge from the soil which adheres to the roots of imported American plants of these kinds, this is the kind of soil in which many of them are found naturally to grow at home. Many of them are also found in extremely thin strata of vegetable mould, over a subsoil of nearly pure sand. I never saw such peat earth, in which they are usually raised in this country, about the roots of imported American plants. As I never have seen any of the European species imported, I do not know what kind of soil they are found in; but I know, from experience, that in a fresh, hazelly loam, some sorts will thrive admirably. Unfortunately, however, it is often as difficult to procure this kind of earth in Britain, and we have often to carry it as far as peat earth.

I, therefore, subjoin a statement of the proportions, in which I recommend the substances I have spoken of to be mixed, as a compost, in which to plant the delightful evergreens of which I am treating, and which every person, fond of horticulture, or "arboriculture," must desire to see greatly extended throughout the country.

Take *Peat earth*,

Pit sand,

Vegetable mould, or *old hot-bed dung*:

Let these three be mixed in equal proportions, and by being frequently turned, let them be thoroughly incorporated. Where vegetable mould, or old hot-bed dung, can with difficulty be got in sufficient quantity,

Take Two parts of *peat earth*,

One part of *pit sand*:

Let these be well mixed, as above directed; but if the peat earth originally contain no sand, but is as pure as that commonly employed for fuel, it should be mixed with an equal quantity of sand. This last compost, however, will require a longer time before it is fit for use; it should, at least, be exposed for one winter, and during that time

frequently turned. Even where peat earth can be got in any quantity, pit sand should be incorporated with it, to form a soil for these plants; for, in such a mixture, I have always found them to thrive greatly better than in pure peat earth.

There is not a doubt, that where abundance of the proper compost has been prepared, it is well to obey the directions usually given, and to form entirely of it the border or plat, by previously removing the original soil to the depth of one and a half or two feet. Where little compost is prepared, or its expense felt, even when reduced by the substitutes I have recommended, I would advise, that holes or pits be dug, accommodated to the size of the plants to be put into them; that some of the compost should be thrown into the bottom of the hole or pit; and after the plant has been put into its situation, (the hole extending three or four inches in all directions beyond the roots of the plant,) this hole should be filled up with the compost. In this way, one or two barrowfuls, according to the size of the plants, will be sufficient for each. Whether the plants are thus put into holes or pits prepared for each, or whether the whole border or clump is made of prepared compost, a top-dressing, to the depth of an inch or two, should be thrown upon the surface every second or third year, as the roots of all these plants rise to the surface; and without this, will suffer from dry weather during the summer months. This observation, however, is chiefly applicable to plants in shrubberies or gardens, where the surface is kept clean by hoeing and raking; when raised as underwood, in plantations where the surface is grassy, and where the leaves of trees or other vegetable matter are allowed to lie and rot on the surface, a top-dressing is quite unnecessary.

The soil recommended above for the formation of the borders, I should recommend in preference to any other for top-dressing; but where peat earth is not to be had, or is

expensive from its distance, I should suggest the following composition, as very well adapted for top-dressing.

Take One part *vegetable mould, old hot-bed dung*, or *old tan*, or *a mixture of all three*;
One part *pit sand*,
One part good *garden earth*:

Let these be thoroughly mixed together by frequent turning and exposure to the weather, till they assume the appearance of one uniform mass of light sandy earth. This will form an excellent substitute for the former compost in top-dressing; and, indeed, I can assert from experience, that an abundant supply of such, completely incorporated and pulverized, will render us nearly independent of peat earth, in cultivating these greatest ornaments of the garden or of underwood.

The beauty of those plants as evergreens, and the splendour of their flowers in May, June, and July, make it certain, that the value of the addition which a profusion of them would give to every scene, must be appreciated by every body. I cannot, therefore, but believe, that, if the treatment and soil which I have recommended, and in which I can confidently assert they thrive admirably, be adopted, attempts would be more frequently made to fill the parks and forests of landed proprietors with them. They are perfectly hardy: I have never known them suffer from the severity of our winters; so that they are more hardy than the Portugal Laurel, Common Laurel, or Laurestine, which have been known to suffer in some situations. I at present allude to the Rhododendrons and Kalmias, and I may include Azalea and Rhodora, though not evergreens, and many other shrubs, known by the name of American plants.

I have drawn out these observations far beyond the limits to which I at first thought they would have extended; but I have had two objects before me, and I could not

accomplish them in smaller space. I was anxious to convince gardeners, that the treatment of evergreens, at present generally recommended and practised, is injurious to them; and I was desirous of pointing out to proprietors of ornamental parks and ornamental plantations, that subjects which their taste must dictate as fit for such situations, may be obtained with much more certainty, and at much smaller expense, than is generally believed.

The statements I have made are contrary to the opinions, and opposed to the prejudices, of many of my professional brethren, and I doubt not will therefore be received by many with displeasure; but if I have made use of one expression which is calculated to give offence, or to hurt the feelings of any in the profession, I have done it inadvertently, and I am sorry for it. To my younger brethren, in particular, I would urge the following advice: Believe nothing implicitly on my authority—exercise your own judgments—take every opportunity which you can possibly command, to put to the test of experiment the statements I have made, and abide by the decision of facts. If, after sufficient experience, I am found wrong, then reject as useless, or worse than useless, all which I have written. If the method I have recommended have a patient, careful, and candid trial, I entertain not the least fear that I shall be found wrong. Be assured, that my confidence does not arise from theory; my confidence arises from long continued extensive practice, and the almost invariable success with which I have been rewarded. That field in which I have been lately occupied is open to the public; and I fear no attack from any critic who will suffer himself to be led, in the formation of his opinion, by the state of the evergreens in the Royal Botanic Garden at Edinburgh. I write ardently upon the subject, because I feel keenly upon it. I admire evergreens—I am anxious to see them diffused in crowds over the country; and if the measures I

have advocated be followed, I do not despair of seeing my wishes in a great measure realised.

One word more, and I have done. There never was a time in which so much was supposed to be done for the educatior of gardeners as at present; there never was a time in which more was expected from them; and there never was a time when their employers generally were so capable of judging of their proficiency: therefore, there never was a time in which more exertion was called for from a young man, who has any ambition to rise in his profession.

I honestly confess that I shall be proud if I find that any representations of mine shall have increased the cultivation of evergreens; and I am ambitious to have it believed, that the whole of these observations have been dictated, as in truth they have been, by a wish to benefit, not to criticise, any of my brethren.

A List of Hardy Evergreens, a quantity of which should always be kept in Pots in the Nurseries, and none of which should be ordered by Gardeners to be packed, and sent to a distance, unless they have been kept in Pots.

Arbutus andrachne -	Oriental Strawberry tree.
——— *hybrida* - -	Hybrid do.
——— *Unedo* - -	Common do.
——— ——— *crispa* -	——— curled-leaved do.
——— ——— *fl. pleno* -	——— double-flowered do.
——— ——— *fl. rubra* -	——— red-flowered do.
Aristotelia Maqui -	Shining-leaved Aristotelia.
Aucuba japonica -	Blotch-leaved Aucuba.
Buxus balearica - -	Minorca Box-tree.
Cupressus lusitanica -	Cedar of Goa.
——— *sempervirens* -	Evergreen Cypress.
——— ——— *horizontalis*	——— horizontal Cypress.
——— ——— *stricta*	——— upright do.
——— *thyoides* -	White Cedar.
Daphne cneorum - -	Trailing Daphne.
——— *collina* - -	Hairy do.
——— *gnidium* - -	Flax-leaved do.
——— *pontica* - -	ontic do.
Erica arborea - -	Tree Heath.
——— *australis* -	Spanish do.
——— *mediterranea* -	Mediterranean do.
——— *stricta* - -	Straight-branched do.
Ilex balearica - -	Minorca Holly.
Juniperus Oxycedrus -	Brown-berried Juniper.
——— *phœnicia* -	Phœnician Cedar or Juniper.
——— *suecica* -	Swedish Juniper.
——— *virginiana* -	Virginian Juniper or red Cedar.
Laurus nobilis - -	Common sweet Bay.
——— *salicifolia* -	——— willow-leaved do.
——— *undulata* -	——— wave-leaved do.
——— *variegata* -	——— variegated do.
Ligustrum lucidum - -	Wax-tree Privet.

Magnolia grandiflora - -	Laurel-leaved Magnolia, and all the varieties.
Mespilus Pyracantha -	Pyracantha, or Evergreen Thorn.
Phillyrea angustifolia -	Narrow-leaved Phillyrea.
——— *latifolia* - -	Broad-leaved do.
——— *media* - -	Privet-leaved do.
Photinia serrulata - -	Serrulate-leaved Photinia.
Pinus canadensis - -	Hemlock Spruce-fir.
——— *Cedrus* - - -	Cedar of Lebanon.
——— *halepensis* - -	Aleppo do.
——— *maritima* - -	Maritime do.
——— *palustris* - -	Swamp do.
——— *Pinea* - -	Stone do.
Prinos glaber - -	Evergreen Winter-berry.
Quercus coccifera - -	Kermes Oak-tree.
——— *gramuntia* -	Holly-leaved Evergreen Oak.
——— *Ilex* - - -	Evergreen, or Holm Oak-tree.
——— *suber* - -	Cork-tree.
Rhamnus Alaternus -	Common Alaternus.
——— ——— *fol. argenteis*	——— do. silver striped.
——— ——— *fol. aureis*	——— do. gold-striped.
——— ——— *balearicus*	——— do. round saw-leaved.
——— ——— *hispanicus*	——— do. Spanish.
——— ——— *latifolius*	——— do. broad-leaved.
——— ——— *maculatus*	——— do. spot-leaved.
——— *hybridus* - -	Hybrid Alaternus.
Thuja orientalis - -	Chinese Arbor-vitæ.
——— *plicata* - -	Nee's do.
Ulex Europæus fl. pleno	Double flowering Whin.
——— ——— *strictus*	Upright Irish do.
Viburnum strictum - -	Upright Laurestine.
——— *lucidum* -	Shining do.
Yucca gloriosa - -	Handsome Yucca, or Adam's needle.

THE END.

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